THE UNIVERSITY OF ALBERTA STAFF BULLETIN

EDMONTON, ALBERTA

AUGUST 24, 1972

SCIENTIST SHEDS LIGHT ON AURORA BOREALIS

to send legions to the north to fight

aurora borealis, the northern lights, are accome what of a mystery to even the most ment of the world's solar terrestrial entists. Experts agree on certain points—here the energy which causes the auroras comes from originally, and where it is absequently stored. But how it is released to create the colorful displays in the northern skies remains a point of controversy.

Theories concerning this controversy will be discussed next week at the Solar Terrestrial Relations Conference, being held at The University of Calgary. GORDON ROSTOKER, Assistant Professor of Killam Earth Sciences and of Physics, will represent The University of Alberta at the international conference.

Dr. Rostoker has studied solar terrestrial relations for a number of years and is keenly interested in auroras. As difficult as it is to translate highly technical information into laymen's language, he maintains a busy lecture schedule which includes ham radio operators and amateur groups, as well as other scientists.

His lectures begin at a point on which most scientists agree—the sun gives off energy in the form of solar wind, and this wind hits the earth's protective magnetic field, distorting it. The incoming energy is stored in the magnetic tail trailing behind the earth. There are two main schools of thought regarding what happens to the energy at this point. One suggests the magnetic tail is in the shape of a stretched-out rubber band-a continuous field that never breaks up, even when some sort of instability causes the energy to shoot back in towards the earth, creating the northern lights. The other suggests the tail is made up of separate magnetic field lines streaming out behind the earth like so many tentacles. It is said the solar wind pushes against these lines, ausing them to connect and shoot back in towards the earth, as in the first theory.

"Whatever the method, scientists agree the magnetic tail involves an intricate balance between the pressures of magnetic fields and charged particles," says Dr. Rostoker. "Because they are charged, we know their motion must be controlled by magnetic and electric fields. Some of these charged particles are forced

close to the earth, where they smash into the particles of the constituent atmosphere and excite them.

"This energy often comes in the form of visual radiation where the color of the light emitted is related to the amount of energy which is radiated. For the auroras there are three well-known colors, each of which involves a different such emission. The green color occurs 80 or 90 miles above the surface of the earth, where oxygen is excited by incoming electrons; the often-observed lower border of purple involves the same process with the nitrogen atom. The great red auroras involve atomic oxygen which has been excited at very high altitudes—close to 200 miles—by incoming charged particles."

He points out that the zone of maximum activity, where one could see an auroral display on any given night, lies about 400 miles north of Edmonton.

"During great auroral displays, however, the centre of activity has been known to move to very low latitudes," says Dr. Rostoker. "That explains why such men as Anaximenes and Aristotle, who lived in the Mediterranean region, were able to witness auroras."

INTERNATIONAL GEOPHYSICS SYMPOSIUM AT BANFF

The ninth international symposium on geophysical theory and computers is being held at the Banff School of Fine Arts from August 24 to 31.

The University of Alberta, who is sponsoring the event in conjunction with the Associate Committee for Geodesy and Geophysics of the National Research Council, will be host to more than a hundred of the world's top geophysicists from Canada, the

FOLIO

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United States, Brazil, Israel, England, Holland, Japan, France, and possibly Russia.

"The fact that the symposium is now coming to Canada is recognition by the world's scientific community of the substantial work that has been done in Canada on this kind of science," says EDO NYLAND, Assistant Professor of Physics and a member of the organizing committee.

Scientists from this University are at the forefront of several subjects which will be discussed at the symposium. E. R. KANASEWICH, Professor of Physics, and his colleagues have been studying core mantle inhomogeneities—changes in the composition of matter at the boundary of the core, 1,800 miles beneath the earth's surface, while investigations into the electromagnetic behavior of the earth have been carried out in North America, Australia, and Africa by D. I. GOUGH, Professor of Physics. J. A. JACOBS, Killam Memorial Professor of Science, is recognized as an international authority on theories for the origin of the earth's magnetic field.

Among scientists attending from abroad will be Sir HAROLD JEFFREYS of Cambridge University, one of the first scientists to investigate geophysics, and s. L. PEKERI, Chairman of the Department of Applied Mathematics at the Weizman Institute of Israel.

Professors Nyland, Kanasewich, Jacobs, and C. H. CHAPMAN, Assistant Professor of Physics, are all members of the Edmonton organizing committee.

ANGUS MC GUGAN 1894-1972

ANGUS MC GUGAN, Superintendent of The University of Alberta Hospital from 1942 to 1960 and a popular member of City Council



from 1959 to 1968, died August 16, 1972 at the age of 77.

Dr. McGugan began practicing medicine in Edmonton in 1929, the year he received his medical degree from this University. The following year he was appointed

director of the provincial division of communicable diseases, a post he held for five years. In 1932 he began teaching bacteriology part-time in the University's Faculty of Medicine, remaining until 1941. From 1935 to 1938 he was medical officer at the Ponoka mental hospital, and from 1938 to 1942 he served as medical inspector of hospitals and assistant deputy minister of health.

In 1959, during his tenure at University Hospital, he became the first Albertan to receive the George Findlay Stephens Memorial Award for outstanding hospital service. The same year, he was elected to City Council as a Civic Reform Association candidate, resigning in 1963 but being elected again in 1964.

Dr. McGugan was past president of The University of Alberta Alumni Association, the Alberta Blue Cross, the Associated Hospitals of Alberta, and the Canadian Hospital Association. He also served for eight years as a regent for western Canada in the American College of Hospital Administrators.

He is survived by his daughter Sheila and son-in-law Thomas Alfred Petersen of Edmonton and four granddaughters.

THE INDIVIDUAL AND THE ENVIRONMENT

The lack of good management policies is threatening already-endangered species with extinction. And if nature dies, man follows close behind.

These and other thoughts were expressed by the 125 delegates to the four-day conference of the Canadian Nature Federation. The conference, which centred on "The individual's role in environmental decisions," was held on campus last week and drew representatives from every province in Canada. In addition to panel discussions and feedback sessions, delegates attended workshops to discuss specific proposals.

NOTICES

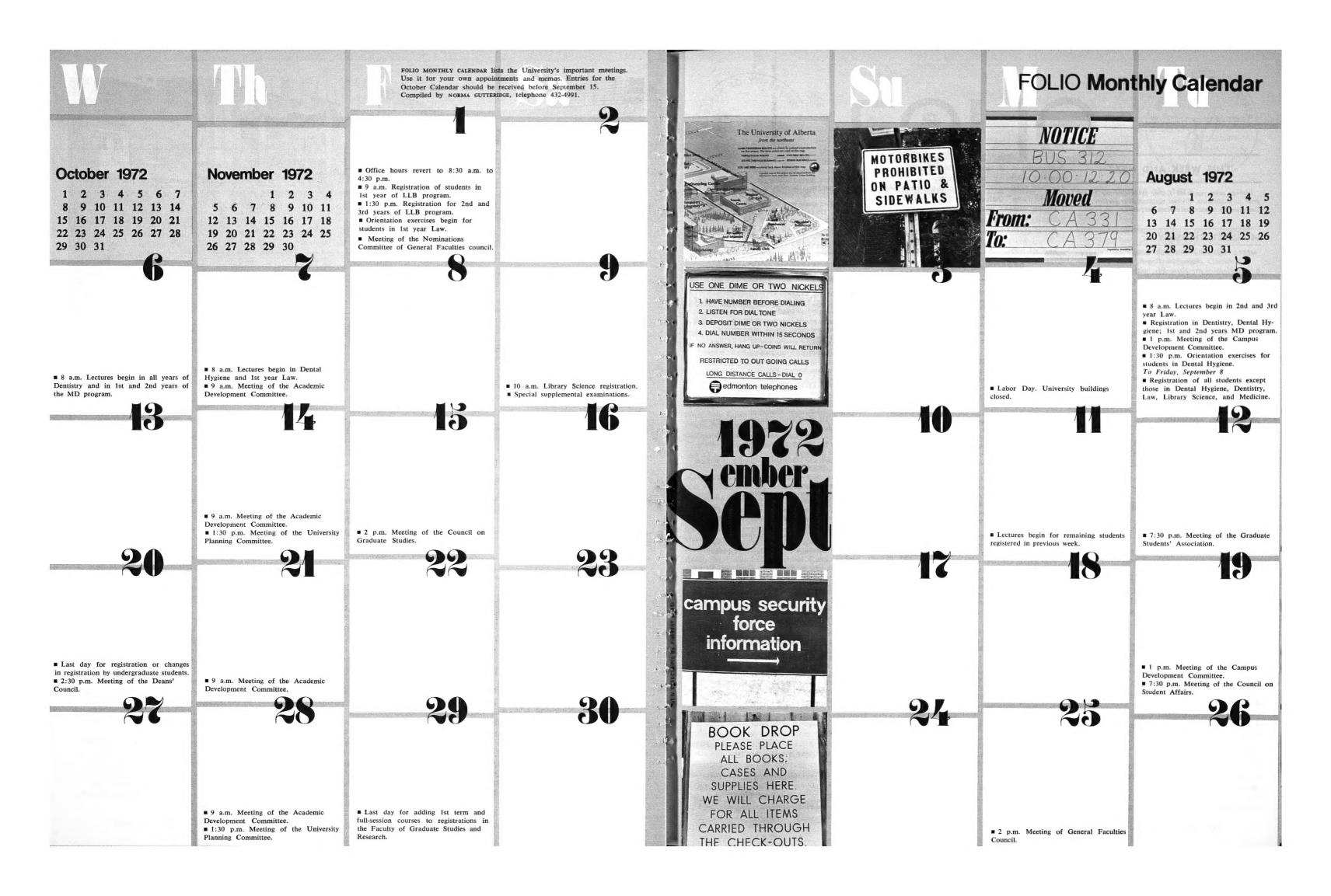
EDUCATIONAL TRADITIONS STUDIED BY COMMITTEE

The Committee to Investigate Teaching is trying to explore new ways and means of modifying time-honored customs in education, and two of its studies this year will deal with new approaches to traditional problems.

The first, dealing with the possible Pass/Fail grading system, is an attempt to assess this grading system in the context of our campus. Any person interested in participating in this study is asked to contact DAVID OTTO, Project Research Director, at 432-5295.

The second study is a continuation of inspection of the non-traditional classroom. Those interested in booking or in viewing either of the two experimental classrooms for the Winter Session are invited to attend an open house on Friday, September 8 from 2 to 4 p.m. in Room 289 Central Academic Building. Members of the committee will be in attendance to answer questions and to take bookings.

(More "Notices" on page five)





About the time Summer Session students were writing final exams in Central Academic Building, workmen with jackhammers were tearing up the patio and pavement between the building and Cameron Library. When the work is completed, the area will have been landscaped

according to a plan that calls for a patio with benches outside the CAB cafeteria, a terraced lawn, and a number of large and small trees to disguise a fire access lane. Trees also will be planted along the north wall of the Civil-Electrical Engineering Building.

TRAFFIC AND PARKING REGULATIONS

This notice has been received from F. SARGENT, Assistant to the Director of Physical Plant.

The following new paragraph is to be inserted in copies of the 1972 Traffic and Parking Regulations which have been issued without this paragraph.

5.4 Procedure when parking space is illegally occupied.

When the holder of a valid parking permit finds his stall illegally occupied, or his assigned zone full, he may park his vehicle at a vacant metered stall without payment, or in another zone, leaving a note on the windshield outlining the occurrence and immediately telephone his complaint to the Campus Security Office (except that the holder of a permit for a peripheral zone (Zones X, Y, and K) may only park at a vacant meter or in another peripheral zone). Under no circumstances may a person who finds his stall illegally occupied or his assigned zone full, park in another numbered stall.

COMMONWEALTH UNIVERSITIES YEARBOOK 1972

The 1972 Commonwealth Universities Yearbook, the forty-ninth edition of the annual directory which is the principal publication of the Association of Commonwealth Universities, has now been published.

The Yearbook is a standard guide which provides in its 2,100 pages the essential facts needed by university teachers and administrators, students, and others seeking detailed information about the facilities, organization, staff, and activities of university institutions of good standing in the Commonwealth. This edition contains information about universities in Bangladesh and Pakistan.

Authoritative essays by leading academic personalities introduce the pages for Australia, Britain, Canada, India, New Zealand, Nigeria, Pakistan, and Bangladesh. Each is primarily intended for people abroad as a factual guide to university education in that country. There are six appendices. One contains a detailed summary of the admission requirements of the universities in the countries listed above.

The Yearbook is being distributed in Canada by the Association of Universities and Colleges

of Canada. It is available at a 35 percent discount to anyone in an ACU or AUCC member organization. Orders should be directed to the Circulation Manager, Association of Universities and Colleges of Canada, 151 Slater Street, Ottawa, Ontario K1P 5N1.

VOLUNTEERS REQUIRED

The Society for the Retired and Semiretired is looking for volunteers for its Friendly Visiting program. "Friendly visitors" are those who, through regular weekly visiting, become friends of older people who are unable to leave their homes easily.

Volunteers will be given informal training by the Society, who will try to match them with a congenial older person who would enjoy the contact. Society staff will also provide continuing assistance.

Anyone interested in this program and who is able to give several hours a week to it, should telephone the Society for the Retired and Semi-retired at 423-3770 or 424-4721, or call at the Society's centre at 10169 104 Street, between 9 a.m. and 4:30 p.m., Mondays through Fridays.



THIS WEEK AND NEXT

Listings must reach the Editor by 9 a.m. the Friday prior to publication. Written notification is preferred. Compiled by NORMA GUTTERIDGE, 432-4991.

24 AUGUST, THURSDAY

MEETA University Television Series 'Hey! What's Going On There?'

8 p.m. Uses of the Fruit Fly, with DAVID NASH, Associate Professor of Genetics. Channel 11.

25 AUGUST, FRIDAY

Faculty Club

Downstairs. "August Round-up." Barbecued hamburgers and steaks, deep apple pie. Hamburgers \$2.50, steaks \$3.75.

MEETA Television Series 'The Toy That Grew Up' 8 p.m. *Mickey*, starring one of the silent screen's most popular comediennes, Mabel Normand, in what is considered to be her best film. Channel 11.

26 AUGUST, SATURDAY

Faculty Club

Downstairs. Meals served from 6 to 10 p.m. Barbecued steaks, beef, fowl, and seafood. Dancing in lower area from 9 p.m. until midnight.

31 AUGUST, THURSDAY

MEETA University Television Series 'Hey! What's Going On There?'

8 p.m. Sensory Experimentation, with K. G. MC WHIRTER, Associate Professor of Genetics. Channel 11.

1 SEPTEMBER, FRIDAY

MEETA Television Series 'The Toy That Grew Up' 8 p.m. "The Films of Ben Turpin"—Idle Eyes (1917), A Small Town Idle (1921), and The Eyes Have It (1928). Channel 11.

8 SEPTEMBER, FRIDAY

Annual Faculty Golf Tournament

10 a.m. Ladies and single players welcome. Barbeque at the Faculty Club at 6 p.m. Greens fees \$3. Broadmoor Golf Club.

EXHIBITIONS

Edmonton Art Gallery

Until 3 September. "This land: selections from the Permanent Collection, the Stern Collection, and the E. E. Poole Foundation" Western Canadian landscapes.

Until 3 September. The Sears, Roebuck Collection of American toys, circulated by the Smithsonian Institution.

Until 12 September. "The Great Canadian Super Show of Canadian Ideas," an exhibition of works of art resulting from a competition held earlier in the year in a search for the elusive Canadian cultural identity.

Until 14 September. "Watercolor painters from Saskatchewan," including works by ERNEST LINDNER, ROBERT HURLEY, RETA COWLEY, DOROTHY KNOWLES, and ROBERT SYMONS.

PERSONAL NOTICES

Notices must be received by 9 a.m. the Friday prior to publication. Rate is seven cents per word for the first insertion and five cents per word for subsequent insertions ordered with the first. Minimum charge is \$1. To avoid billing, notices MUST BE PAID IN ADVANCE. For assistance or order blanks, telephone Mrs. Adrienne Lent, 432-4991.

Accommodation available

FOR RENT—To ladies, two housekeeping rooms, 10806 85 Avenue. 433-1516.

FOR RENT—Three-bedroom home, Crestwood district, off Quesnel Drive. Partly furnished, rumpus room, double garage. No pets. \$275/month. 452-3854.

FOR RENT—Three-room suite, 124 Street. Rent reduced to \$75 for caretaking small, quiet, clean older block, garage. 452-3854.

For sale—Belgravia, \$23,000. Small but so very nice! Professionally remodeled bungalow features master bedroom with walk-in dressing room closet. Rosewood paneled rumpus room. Quality broadloom, new furnace and water tank, double garage with separate furnace. On bus line to U of A. Fred Ragan, res. 434-3119, bus. 439-3995.

FOR SALE—Belgravia, \$24,600. Three-bedroom bungalow, formal dining room; full basement features rumpus room and two additional bedrooms. Kitchen range and fridge included in price. Fred Ragan, 434-3119 or 439-3995.

FOR SALE—Malmo, \$35,300. 1,800 sq. ft. four-bedroom family home. Split-entry floor plan. Tindle-stone fireplace, rumpus room, two baths, triple garage. Fred Ragan, 434-3119 or 439-3995.

FOR SALE—Grandview, \$44,900. Modern bungalow in premium area. Bay window in living room, two open fireplaces, rumpus room and separate games room in basement with half bath. Family bath and master bath on main floor with three bedrooms. Double garage. Aluminum siding. Fred Ragan, res. 434-3119 or bus, 439-3995.

For these and other listings convenient to The University of Alberta call Fred Ragan, res. 434-3119, bus. 439-3995. Melton Real Estate Ltd., 10820 82 Avenue.

WANTED—Two girls to share two-bedroom apartment with same in Garneau Towers. 433-4325.

FOR RENT—Fully-furnished five-room bungalow, available October to May. Married couple preferred. \$275/month including heat. 454-3342.

FOR RENT TO GRADUATE STUDENT—Bedroom, small sitting room, shower. Private entrance. 433-1122 after 5 (11831 Saskatchewan Drive).

FOR RENT—Large three-bedroom furnished house, 11124 84 Avenue, \$250/month. Collins, 422-7191. FOR RENT—Double garage in Windsor Park, two blocks west of residences. Contact Mrs. Agrios, 8352 120

Automobiles and accessories

FOR SALE—1970 VW bus, deluxe, plus extras, \$2,900. Phone 599-6225.

Goods and services

FOR SALE—Flute, \$40. Phone 599-6225.

FOR SALE—Four-speed portable record player, \$10; set of metal (wood-tone) book or utility shelves, \$5; mattress, 72" x 48", \$15. 439-2474.

FOR SALE—Two single beds with sheets, covers, new condition, \$75 each. Two side tables, \$6, \$8.50; one coffee table, \$7.50. 432-3355.

POSITIONS VACANT

NON-ACADEMIC STAFF

Applicants are sought for the following positions. The Personnel Office (Room 121, Administration Building) will provide further details to interested persons, who are asked not to approach the departments directly.

Clerk Typist I (\$302-\$385)—Personnel Clerk Typist II (\$331-\$423)—Geography; Central Stores; Political Science; Education Curriculum Laboratory

Clerk Steno II (\$348-\$444)—Comptroller's Office; Art and Design; Food Science; Pharmacology; Mathematics; Educational Administration; Health Sciences Audiovisual Education; Extension

Clerk Steno III (\$403-\$513)—Medicine; Theoretical Physics Institute

Bookkeeper I (\$331-\$423)—Mechanical Engineering Bookkeeper II (\$403-\$513)—Agricultural Economics and Rural Sociology

Keypunch Operator (\$366-\$466)—Computing Services Secretary (\$466-\$595)—Campus Development Departmental Secretary (\$539-\$688)—Chemical and Petroleum Engineering

Shipper and Receiver (open)—Printing Stockman (\$385-\$489)—Central Stores Shipper (\$2.65/hour)—Shipping and Receiving Audio Visual Assistant (\$385-\$489)—Health Sciences

Audiovisual Education
Tracer (\$302-\$385)—Technical Services
Control Clerk (\$302-\$566)—Computing Services
4 Computer Operators (\$348-\$722)—Computing

Applications Analyst (\$655-\$722)—Computing Services
Art Technician I (\$489-\$624)—Art and Design
Costume Supervisor (\$595-\$759)—Drama
Technician Demonstrator I (\$624-\$796)—Art and
Design

Laser Technician (\$655-\$836)—Electrical Engineering Senior Technical Assistant (\$489-\$624)—Soil Science Bacteriology Technologist I (\$513-\$655)—Provincial Laboratory; Microbiology

Bacteriology Technologist II (\$595-\$759)—Provincial Laboratory

Biochemical Technologist I (\$566-\$722)—Cancer Research Unit

Biochemical Technologist II (\$655-\$836)—Cancer Research Unit

Chemical Technologist (\$566-\$722)—Household Economics

Mail Carrier I (open)—Special Services Truck Driver (open)—Special Services Laboratory Assistant II (\$366-\$466)—Civil Engineering